



SIMATIC S7-1200, CPU 1215C, COMPACT CPU, AC/DC/RELAY, 2 PROFINET PORT, ONBOARD I/O: 14 DI 24V DC; 10 DO RELAY 2A, 2 AI 0-10V DC, 2 AO 0-20MA DC, POWER SUPPLY: AC 85 - 264 V AC AT 47 - 63 HZ, PROGRAM/DATA MEMORY: 100 KB

General information

Engineering with

- Programming package STEP 7 V13 SP1 or higher

Display

with display No

Supply voltage

Rated value (AC)

- 120 V AC Yes
- 230 V AC Yes

permissible range, lower limit (AC) 85 V

permissible range, upper limit (AC) 265 V

Line frequency

- permissible frequency range, lower limit 47 Hz
- permissible frequency range, upper limit 63 Hz

Input current

Current consumption (rated value) 100 mA at 120 V AC; 50 mA at 240 V AC

Current consumption, max. 300 mA at 120 V AC; 150 mA at 240 V AC

Inrush current, max. 20 A; at 264 V

Power losses

Power loss, typ. 12 W

Memory

Type of memory EEPROM

Work memory

<ul style="list-style-type: none"> • Integrated 	125 kbyte
<ul style="list-style-type: none"> • expandable 	No
Load memory	
<ul style="list-style-type: none"> • Integrated 	4 Mbyte
<ul style="list-style-type: none"> • Plug-in (SIMATIC Memory Card), max. 	with SIMATIC memory card
Backup	
<ul style="list-style-type: none"> • present 	Yes; maintenance-free
<ul style="list-style-type: none"> • without battery 	Yes
CPU processing times	
for bit operations, typ.	0.085 µs; / instruction
for word operations, typ.	1.7 µs; / instruction
for floating point arithmetic, typ.	2.5 µs; / instruction
CPU-blocks	
Number of blocks (total)	DBs, FCs, FBs, counters and timers. The maximum number of addressable blocks ranges from 1 to 65535. There is no restriction, the entire working memory can be used
OB	
<ul style="list-style-type: none"> • Number, max. 	Limited only by RAM for code
Data areas and their retentivity	
retentive data area in total (incl. times, counters, flags), max.	10 kbyte
Flag	
<ul style="list-style-type: none"> • Number, max. 	8 kbyte; Size of bit memory address area
Process image	
<ul style="list-style-type: none"> • Inputs, adjustable 	1 kbyte
<ul style="list-style-type: none"> • Outputs, adjustable 	1 kbyte
Hardware configuration	
Number of modules per system, max.	3 comm. modules, 1 signal board, 8 signal modules
Time of day	
Clock	
<ul style="list-style-type: none"> • Hardware clock (real-time clock) 	Yes
<ul style="list-style-type: none"> • Deviation per day, max. 	+/- 60 s/month at 25 °C
<ul style="list-style-type: none"> • Backup time 	480 h; Typical
Digital inputs	
Number of digital inputs	14; Integrated
<ul style="list-style-type: none"> • of which, inputs usable for technological functions 	6; HSC (High Speed Counting)
integrated channels (DI)	14
m/p-reading	Yes
Number of simultaneously controllable inputs	
all mounting positions	

— up to 40 °C, max.	14
Input voltage	
• Rated value (DC)	24 V
• for signal "0"	5 V DC at 1 mA
• for signal "1"	15 VDC at 2.5 mA
Input current	
• for signal "1", typ.	1 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— Parameterizable	Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four
— at "0" to "1", min.	0.2 ms
— at "0" to "1", max.	12.8 ms
for interrupt inputs	
— Parameterizable	Yes
for counter/technological functions	
— Parameterizable	Yes; Single phase : 3 at 100 kHz & 3 at 30 kHz, differential: 3 at 80 kHz & 3 at 30 kHz
Cable length	
• shielded, max.	500 m; 50 m for technological functions
• Unshielded, max.	300 m; For technological functions: No
Digital outputs	
Number of digital outputs	10; Relays
integrated channels (DO)	10
short-circuit protection	No; to be provided externally
Switching capacity of the outputs	
• with resistive load, max.	2 A
• on lamp load, max.	30 W with DC, 200 W with AC
Output delay with resistive load	
• "0" to "1", max.	10 ms; max.
• "1" to "0", max.	10 ms; max.
Switching frequency	
• of the pulse outputs, with resistive load, max.	1 Hz
Relay outputs	
• Number of relay outputs, integrated	10
• Number of relay outputs	10
• Number of operating cycles, max.	mechanically 10 million, at rated load voltage 100,000
Cable length	
• shielded, max.	500 m
• Unshielded, max.	150 m
Analog inputs	
Number of analog inputs	2

Integrated channels (AI)	2; 0 to 10 V
Input ranges	
• Voltage	Yes
Input ranges (rated values), voltages	
• 0 to +10 V	Yes
• Input resistance (0 to 10 V)	≥100k ohms
Cable length	
• shielded, max.	100 m; twisted and shielded

Analog outputs	
Number of analog outputs	2
Integrated channels (AO)	2; 0 to 20 mA
Output ranges, current	
• 0 to 20 mA	Yes
Cable length	
• shielded, max.	100 m; shielded, twisted pair

Analog value creation	
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	10 bit
• Integration time, parameterizable	Yes
• Conversion time (per channel)	625 µs

Encoder	
Connectable encoders	
• 2-wire sensor	Yes

1st interface	
Interface type	PROFINET
Physics	Ethernet
Isolated	Yes
Automatic detection of transmission speed	Yes
Autonegotiation	Yes
Autocrossing	Yes
Functionality	
• PROFINET IO Device	Yes
• PROFINET IO Controller	Yes
PROFINET IO Controller	
• Transmission rate, max.	100 Mbit/s
• Number of connectable IO devices, max.	16
• Prioritized startup	
— Number of IO Devices, max.	16
PROFINET IO Device	
Services	

- Shared device
- Number of IO controllers with shared device, max.

Yes

2

Communication functions

S7 communication

- supported Yes
- as server Yes
- As client Yes

Open IE communication

- TCP/IP Yes
- ISO-on-TCP (RFC1006) Yes
- UDP Yes

Web server

- supported Yes
- User-defined websites Yes

Number of connections

- overall 16; dynamically

Test commissioning functions

Status/control

- Status/control variable Yes
- Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters

Forcing

- Forcing Yes

Diagnostic buffer

- present Yes

Traces

- Number of configurable Traces 2; Up to 512 KB of data per trace are possible

Integrated Functions

Number of counters	6
Counter frequency (counter) max.	100 kHz
Frequency meter	Yes
controlled positioning	Yes
PID controller	Yes
Number of alarm inputs	4

Galvanic isolation

Galvanic isolation digital inputs

- Galvanic isolation digital inputs 500V AC for 1 minute
- between the channels, in groups of 1

Galvanic isolation digital outputs

- Galvanic isolation digital outputs Relays

- between the channels No
- between the channels, in groups of 2

Permissible potential difference

between different circuits 500 V DC between 24 V DC and 5 V DC

EMC

Interference immunity against discharge of static electricity

- Interference immunity against discharge of static electricity acc. to IEC 61000-4-2 Yes
 - Test voltage at air discharge 8 kV
 - Test voltage at contact discharge 6 kV

Interference immunity to cable-borne interference

- Interference immunity on supply lines acc. to IEC 61000-4-4 Yes
- Interference immunity on signal lines acc. to IEC 61000-4-4 Yes

Surge immunity

- on the supply lines acc. to IEC 61000-4-5 Yes

Immunity against conducted interference induced by high-frequency fields

- Interference immunity against high-frequency radiation acc. to IEC 61000-4-6 Yes

Emission of radio interference acc. to EN 55 011

- Limit class A, for use in industrial areas Yes; Group 1
- Limit class B, for use in residential areas Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011

Degree and class of protection

Degree of protection to EN 60529

- IP20 Yes

Standards, approvals, certificates

CE mark Yes

UL approval Yes

cULus Yes

RCM (formerly C-TICK) Yes

FM approval Yes

Marine approval

- Marine approval Yes

Ambient conditions

Free fall

- Drop height, max. (in packaging) 0.3 m; five times, in dispatch package

Ambient temperature in operation

- Min. -20 °C

• max.	60 °C; Number of simultaneously activated inputs or outputs 7 or 5 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 14 or 10 at 55 °C horizontal or 45 °C vertical
• horizontal installation, min.	-20 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	-20 °C
• vertical installation, max.	50 °C
Storage/transport temperature	
• Min.	-40 °C
• max.	70 °C
Air pressure acc. to IEC 60068-2-13	
• Storage/transport, min.	660 hPa
• Storage/transport, max.	1 080 hPa
• Permissible operating height	-1000 to 2000 m
Relative humidity	
• Operation, max.	95 %; no condensation
• Permissible range (without condensation) at 25 °C	95 %
Vibrations	
• Vibrations	2G wall mounting, 1G DIN rail
• Operation, checked according to IEC 60068-2-6	Yes
Shock test	
• checked according to IEC 60068-2-27	Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms
Pollutant concentrations	
— SO2 at RH < 60% without condensation	SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
programming	
Programming language	
— LAD	Yes
— FBD	Yes
— SCL	Yes
Cycle time monitoring	
• can be set	Yes
Dimensions	
Width	130 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	550 g
last modified:	12.03.2015

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Clock Drivers & Distribution](#) category:

Click to view products by [Siemens](#) manufacturer:

Other Similar products are found below :

[8501BYLF](#) [854S015CKI-01LF](#) [8T33FS6221EPGI](#) [NB7V72MMNHTBG](#) [Si53314-B-GMR](#) [4RCD0124KC0ATG](#) [P9090-0NLGI8](#)
[SY100EP33VKG](#) [850S1201BGILF](#) [8004AC-13-33E-125.00000X](#) [ISPPAC-CLK5520V-01T100C8P](#) [4RCD0124KC0ATG8](#) [854110AKILF](#)
[PI6C4931504-04LIE](#) [SI53305-B-GMR](#) [83210AYLF](#) [NB6VQ572MMNG](#) [4RCD0229KB1ATG](#) [PI6C4931502-04LIE](#) [8SLVD1212ANLGI](#)
[PI6C4931504-04LIE](#) [AD9508BCPZ-REEL7](#) [NBA3N200SDR2G](#) [8T79S308NLGI](#) [SI53315-B-GMR](#) [NB7NQ621MMUTWG](#)
[49FCT3805DPYGI8](#) [49FCT805BTPYG](#) [49FCT805PYGI](#) [RS232-S5](#) [542MILFT](#) [6ES7390-1AF30-0AA0](#) [74FCT3807PYGI](#) [SY89873LMG](#)
[SY89875UMG-TR](#) [853S011BGILFT](#) [853S9252BKILF](#) [8P34S1102NLGI8](#) [8T53S111NLGI](#) [CDCVF2505IDRQ1](#) [CDCUA877ZQLT](#)
[CDCE913QPWRQ1](#) [CDC2516DGGR](#) [8SLVP2104ANBGI/W](#) [8S73034AGILF](#) [LV5609LP-E](#) [5T9950PFGI](#) [STCD2400F35F](#)
[74FCT3807QGI8](#) [74FCT3807PYGI8](#)